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Railway Reservation Verification by Aadhar Card

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Abstract

In today world, as we know that railway is one of the biggest network which is used for connecting different areas. But this network is not secure enough as there is no verification of passenger. Anyone can register ticket and can travel in train. Security issues are also there as many passengers having ticket enter in the platform without going through security check.

For making this network secure and verified, use Aadhar Card Number is one of the best solution. By using this, security and verification of all passengers can be done. Ticket verification will be done at railway station by going through biometric check which will confirm the details filled by passenger and after verification from Aadhar database, passenger will get the confirmation message. This biometric check will be done at security check point so that all passenger have to go through security check.

Keywords: Aadhar Card, Security Check Point, Aadhar database

1 Introduction

Indian Railway is largest human transport system in the world. Over 20 million passengers travel daily by train all over India. Security in railway station is not good and even passengers travelling in the train have no verification. In the proposed system, Aadhar card is used for verification plus increasing the security at railway station. The Unique Identification Authority of India (UIDAI) was built up as a joined office of the Planning Commission by the Government of India in the year 2009. The UIDAI is commanded to issue an one of a kind 12-digit number (termed 'Aadhaar') to each occupant of India keeping in mind the end goal to enhance the welfare administrations conveyance of the Government. The UIDAI issued the first set of Aadhaar numbers in September 2010 and as on December 1, 2014, more than 71 crore Aadhaar numbers have been issued to the inhabitants of India. The plan of exceptional identification includes accumulation of demographic data and biometric data from people with the end goal of issuing of remarkable identification numbers (aadhaar numbers) to such individual.[1]

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Some information about Aadhar card –

1. Is the world's biggest ID stage. It is additionally the biggest biometric program on the planet making India a worldwide pioneer in biometric innovation
2. Can be utilized to screen advancement related parameters in such basic divisions as medicinal services, training, and so forth. This can likewise encourage improvement of electronic applications to connect any holes watched
3. Can help to guide gifted labor, in light of the professional preparing obtained by the person, to suitable employment opening/expertise necessities of the State.
4. Empowers moment paperless ledger opening, moment issuance of protection and goes about as a perpetual address.
5. Is easy to utilize: it is a bit much for state to have a high level of IT capacity to embrace and start Aadhaar related administration.
6. Helps in significantly increasing so as to lessen expenses regulatory efficiency and decreasing spillages.
7. Gives a solitary perspective of efficient information and data, helping in streamlining arrangement choices for the state.[1]

Fig 1 Aadhar Card [2]

2 Issues with Exiting System

There are two main issues with current system that are proper verification of passenger and security over railway station. Currently, during reservation time only simple details are added and any identification number which was not cross verified which causes many unknown passengers to travel without any verification. To overcome this, Aadhar number verification is one of the best solutions and no extra work for checking will be done.

Fig 2 Condition when passengers travelling without verification and security check [3]

Another issue is about security, as many passengers having confirmed ticket don't enter from the security check and come from wrong way to platform. This type of entrance in platform caused terrorist attack etc at railway station. For making the security tight at railway station, the verification of aadhar and confirmation of ticket should be done at security check point so that every passenger will going to enter in platform with confirmed ticket should be checked.

3 Proposed System

Implementation of Verification of passenger through aadhar card number includes following stage: Addition of Aadhar card number in database for railway reservation and biometric test for verification.

Addition of Aadhar Card Number in Database

At the time of reservation of ticket for verification only aadhar card number is necessary to add if passenger nationality is India otherwise enter passport number. Aadhar card number will also going to store in database for future reference and this will also help in verifying the passenger travelling.

Database will now look like

Train No.	Name	Age	Aadhar Card Number	Mobile Number	Set No.	Time For verification	Gender
1024	Deep Singh	33	123456783456	9998988954	B2	10:00 am	Male
1024	Komal Rana	28	987654321567	9976543217	C23	5:30 am	Female

Table 1 Train Database after adding aadhar card number

Biometric Test for verification

Now verification of passengers travelling in train will be done at station only. Biometric test will verify all passengers by using aadhar database and matching their finger print with aadhar number.

The biometric Machine will be available at security check only so that every passenger for verification of ticket will go through security check. This will increase the security in railway station.

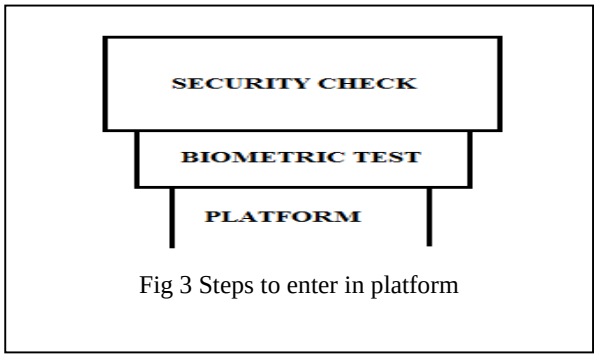


Fig 3 Steps to enter in platform

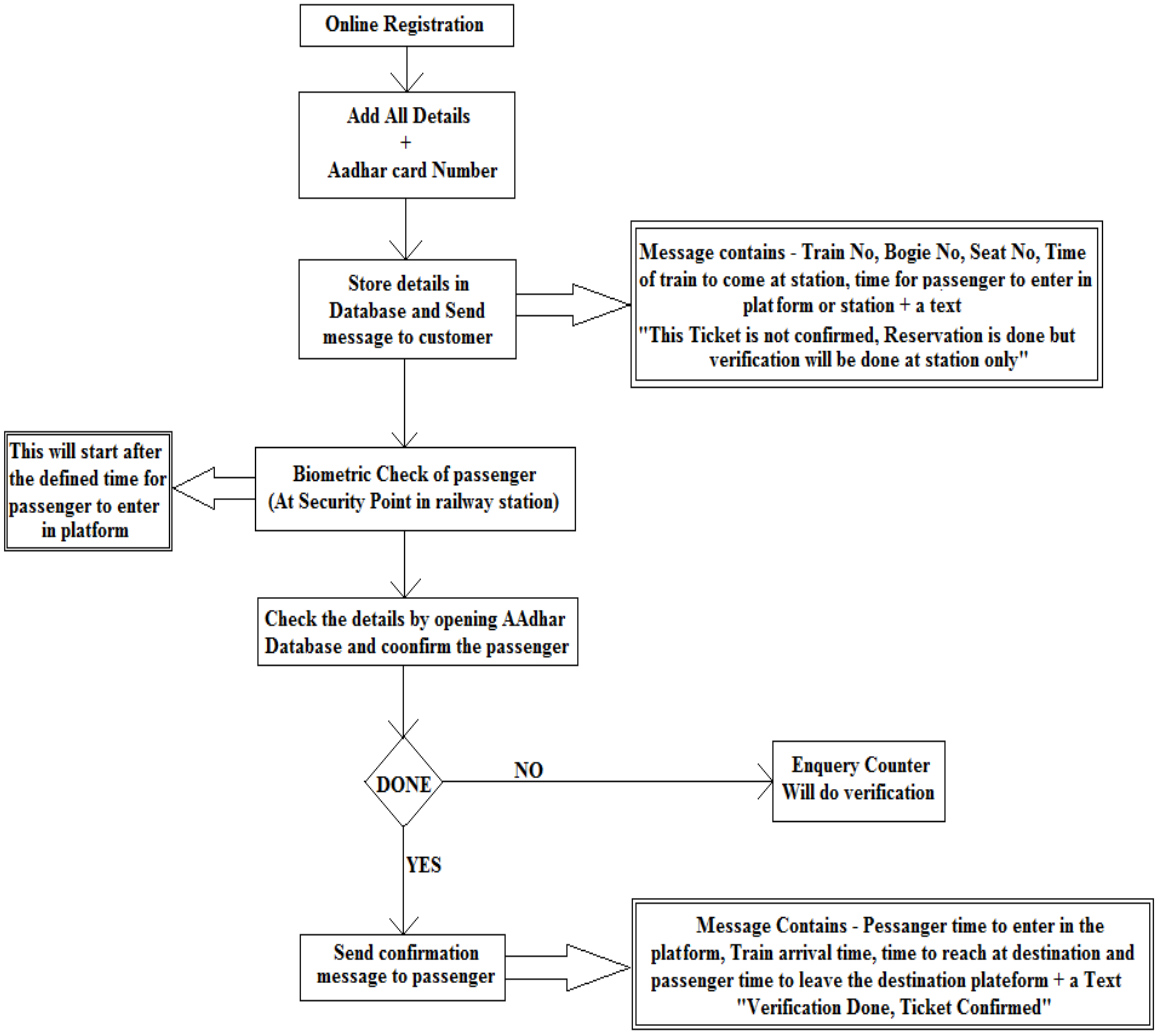
After biometric test, verification message will be send to the passenger containing information regarding train and passenger. Database of this will be maintained till train journey not finish.

Train Number	Aadhar Card Number	Arrival Place and Time	Destination Place and Time	Time to leave railway station
1024	123456783456	Delhi (11:24 am)	Chennai (2,11:54 pm)	00:30 am
1024	987654321567	Chandigarh (6:00 am)	Hyderabad (1,11:24 pm)	00:10 am

Table 2 Database after Biometric Check

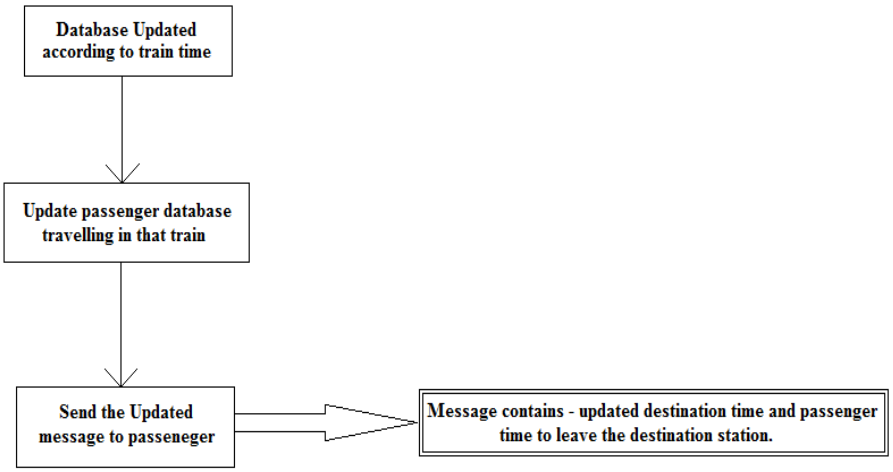
If train traveling duration changes i.e. train becomes late due to some reason then database will update and change will occur in two columns (Destination time and Time to leave railway station).

Implementation



Above flow diagram explains how reservation of ticket is updated and also explain the flow of verfication of ticket and passenger too. During reservation passenger have to add their aadhar card number as mandatory. After all same procedure and paying fare, passenger will recieve message containing train no., bogie no., set no. Etc that are mention in diagram plus a message that verification will be done on station and verfied ticket message with pessanger after verification. Passenger are allowed to enter in the platform at the given time, before that biometric will not verify passenger and passenger will not allowed to enter in the plateform. When pessanger reaches to station, biometric machine will verify the pessanger by checking the database of aadhar. After verification, biometric machine will update database as passenger is verified. After this whole procedure, passenger will get the verified message containin train no., times for train arrival,destination time plus time to leave destination plateform. Biometric checking machine should be situated in secuirty che k cabine so thay every passenger who are coming to platform should be checked.

Condition: If train become late then information update for passenger traveling



Above flow diagram describe, during the travelling time, if the train destination reaching time changes then automatically there is change in the database and message is send to all passenger travelling which will contain information about updated destination and time to leave station time.

4. Future Scope

If this is implemented in future then there will less scope of attack in railways or railway stations. Passenger verification is done automatically and no need of carrying any identity proof for verification. Security over the platform gets automatically increased without increasing any man power. Implementation of this will bring a very good change in the railways reservation and travelling system and this will cover all the problem regarding security and verification of passenger.

5. Conclusion

This proposed framework will increase the security at railway station and verification of passenger is done in very secured way that means each and every passenger travelling in train is verified plus checked. This will reduce fake travelers and also increase security at railway station so that risk for bomb blast or any terror attack will be finished. Implementation of this idea will also reduce the congestion or huge mass over the platform.

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